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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,958	12/18/2001	Bruce A. Reid	9763.00	7170
26889	7590	03/08/2006	EXAMINER	
MICHAEL CHAN NCR CORPORATION 1700 SOUTH PATTERSON BLVD DAYTON, OH 45479-0001			LEE, CHEUKFAN	
			ART UNIT	PAPER NUMBER
			2627	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,958

Applicant(s)

REID, BRUCE A.

Examiner

Cheukfan Lee

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-25 is/are rejected.
- 7) ☒ Claim(s) 1-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/20/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. Claims 1-25 are pending. Claims 1, 8, 12, 18, and 22 are independent.

2. Claims 1-25 are objected to because of the following:

In claim 1, lines 7-8 of the claim, "a document" should be changed to – the document – in order to refer the basis of the term set forth on line 5 of the claim.

Claims 2-7 are objected to as being dependent upon objected claim 1.

In claims 3, 9 and 13, "each light source" should be changed to – each of the first and second light sources – in order to be consistent.

In claim 8, line 2 of the claim, "can" should be deleted, since "can move" does not mean that the document items actual move.

Claims 10 and 11 are objected to as being dependent upon objected claim 8.

In claim 12, line 12 of the claim, "a second side" should read – a first side --.

Claims 13-17 are objected to as being dependent upon objected claim 12.

In claim 18, line 6 of the claim, "a leading edge" and "a document" should be changed to – the leading edge – and – the document – in order to refer to the bases of these terms set forth on line 5 of the claim; and

line 8, "a document item" should be changed to – the document item – in order to refer to the basis set forth on line 5 of the claim.

In claims 19 and 23, "a leading edge" and "a document item" should be changed to – the leading edge – and – the document item – in order to refer to the bases of these terms set forth in claim 18 or claim 22.

In claims 20, 21, 23, and 24 "a document item" should be changed to – the document item – in order to refer to basis of the term set forth in claim 18 or claim 22.

In claim 22, part c), lines 5, 6, and 8-9, "a leading edge" and/or "a document" should be changed to – the leading edge – and/or – the document – in order to refer to the bases of these terms set forth in the claim.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18, 19, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christophersen (PCT International Publication No. WO 01/54076 A1, Published July 26, 2001) in view of Liu et al. (U.S. Patent No. 6,040,584).

Regarding claim 18, Christophersen discloses a method of operating an image-based document processing system, the method comprising the steps of a) energizing a

first light source (5) to provide light which passes through a translucent reference surface (belt 2) to an image capture device (16) to allow the image capture device (16) to detect a leading edge of a document (banknote 14) , and the step of b) energizing a second light source (12, 13) to provide light which is irradiated on the document (14) and then reflected by the document (14) to the image capture device (16) to allow the image capture device to capture an image of the document (14) (Fig. 1a and 5, page 5, line 18 to page 6, line 11).

Christophersen differs from the claimed invention in that the step of energizing the second light source (12, 13) is not performed after the image capture device (16) detects the leading edge of the document (14). It seems that both the first light source (5) and the light source (12, 13) are in their "ON" state simultaneously, according to page 7, lines 3-17 of Christophersen.

Liu et al. discloses a banknote image scanning method comprising sequentially energizing a first light source (310) that emits light to be transmitted through a medium (400) to be detected by an image capture device (340) and a second light source (320) that emits light to be reflected by a medium and then detected by the image capture device (340) (Fig. 5, col. 6, lines 10-16, col. 5, lines 8-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the idea of Liu et al. of energizing the second light source (320) after energizing the first light source (310), to modify the step b) of Christophersen such that the second light source (12, 13) is energized after an edge of the document (14) is detected, in order to conserve energy.

Regarding claim 19, according to col. 6, lines 10-16 of Liu et al., the first light source (310, the light source facing the image capture device 340 in Fig. 5) is deenergized after it completed serving its purpose (which is to emit light through the medium 400 to be detected by the image capture device 340). Based on the reason of obviousness given for claim 18 above for energizing the second light source (12, 13) after the detection of the leading edge of the document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the idea of Liu et al. of deenergizing the first light source after it completed serving its purpose, to deenergize the first light source (5) of Christophersen after the image capture device (16) detects the leading edge of the document, in order to conserve energy and to allow accurate capture of the document image.

Claim 22 recites all limitations of claim 18 rejected above and in addition, the step of "c) pocketing a document item after the image capture device has capture an image of the documents item". The claimed step c) is disclosed by Christophersen. The document (banknote 14) is pocketed in store (11) (Fig. 5, page 5, lines 33-37).

Claim 23 is rejected for the reason given for claim 19, for reciting the limitation of claim 19.

5. Claims 20, 21, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christophersen (PCT International Publication No. WO 01/54076 A1, Published July 26, 2001) in view of Liu et al. (U.S. Patent No. 6,040,584) as applied to claim 18, 19, 22, and 23 above, and further in view of well known art.

Regarding claims 20 and 21, Liu et al. discussed for claims 18 and 19 above disclose deenergizing the second light source (320). Neither Liu et al. or Christophersen disclose detecting a trailing edge of the document and in response deenergizing the second light source. However, the examiner took Official Notice of the fact the employing an document edge sensor at a document transport path to detect the trailing edge of a document so as to generate a signal to be used in a control system is notoriously well known in the art of document position detection. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Christophersen in view Liu et al. with a document edge sensor at the document transport path to generate a signal when a trailing edge of the document is detected, and to deenergize the second light source (12, 13 of Christophersen) in response to the generated signal, in order to allow reduction in energy consumption.

Claims 24 and 25 are rejected for the reasons given for claims 20 and 21, respectively, for reciting the limitations of claims 20 and 21, respectively.

6. Claims 1, 8 and 12 would be allowable if rewritten or amended to overcome the objection(s) set forth in this Office action.

7. Claims 2-7, 9, 10, 11, and 13-17 would be allowable if rewritten to overcome the objection(s) set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The following is an examiner's statement of reasons for allowance:

Claims 1, 8, and 12 would be allowable over the prior art of record because the closest prior art Christophersen does not disclose a translucent reference surface disposed between the first and second light sources for 1) passing through light from the first light source to the image capture device when the first light source is energized, and 2) reflecting the light from the second light source to the image capture device when the second light source is energized, the first light source for illuminating the document to allow the image capture device to detect a leading edge of the document, in combination with other limitations of any of claims 1, 8 and 12.

Claims 2-7, 9, 10, 11, and 13-17 depend on claims 1, 8, or 12.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Christophersen (U.S. Patent No. 6,970,235), "Document monitoring method", corresponds to PCT Internal Publication No. WO 01/54076 A1 applied above.

Naruse (U.S. Patent No. 4,723,072), "Apparatus for discriminating sheets"

Uzawa et al. (4,882,776), "Image information transmitting system", only Fig. 3,
document (edge) sensor (107, 106)

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (571) 272-7407. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cheukfan Lee
February 28, 2006


Cheukfan Lee